SERVICING THE KONICA C35

by Andy Berger

INTRODUCTION

The Konica C35 is a compact 35mm camera incorporating such features as programmed auto exposure, built in flash guide number system and rangefinder for precise focusing.

The shutter, made by Copal for Konica as well as several other Japanese camera manufacturers, is a novel design using only two blades. These blades are used for both speed and aperture control in conjunction with a governor assembly set by a mechanical trap-needle exposure system. The exposure meter is a CdS cell system with the cell mounted above the lens on the nameplate ring where it will automatically compensate for any filters used.

DISASSEMBLY

The bottom cover is secured by three screws. To remove the top cover, unscrew the wind lever retaining screw and remove the wind lever. Underneath is a retaining ring. This retaining ring and a screw under the rewind knob are all that hold the top cover. Lift off the top cover and unsolder the sync wire.

You do not have to remove the top cover to adjust the rangefinder. The horizontal or infinity adjustment is beneath an access screw in the film compartment, Fig. 1. Vertical alignment is made through an access hole underneath the hot-shoe decorator plate, Fig. 2.

The front standard and complete lens assembly are removed as one subassembly. Remove the self-timer lever and peel off the leatherette. There is another easy adjustment point. Under the small plate now visible on the wind side of the camera is an eccentric used to adjust exposure by changing the position at which the exposure meter is trapped by the mechanical exposure system, Fig. 3. This is the first adjustment to be made on an improperly exposing camera after the mechanical system is checked and found to be operating properly.

Continuing with the disassembly remove the nameplate retaining ring, Fig. 4, and lift out the ring. Unsolder the CdS cell leads, Fig. 5. Here is another adjustment point. With the nameplate ring removed, lens collimation can now be ad-

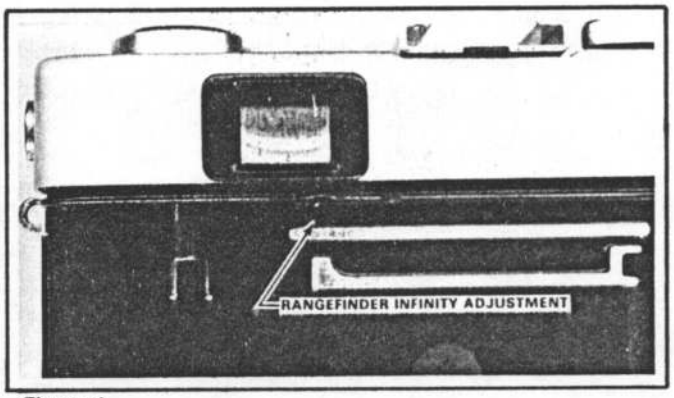
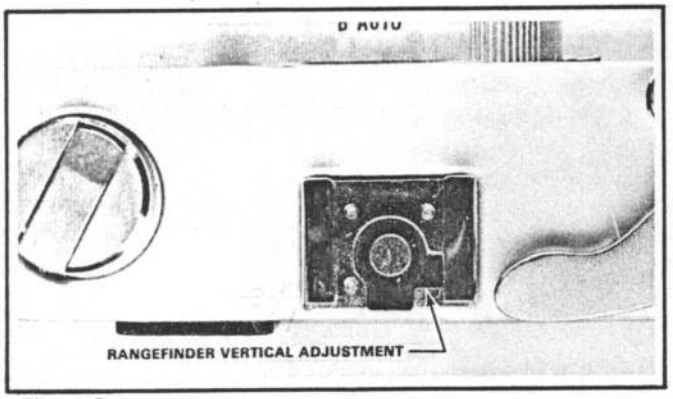


Figure 1



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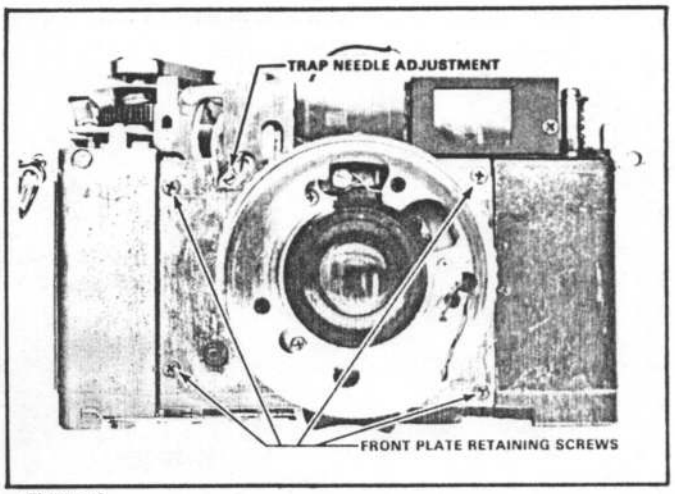

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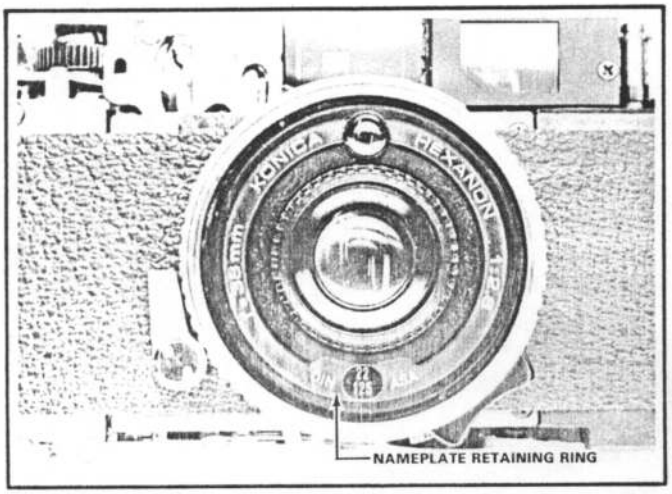

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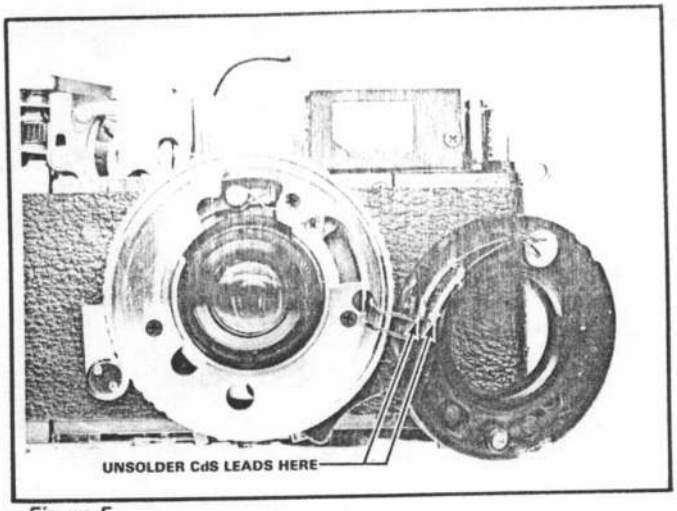

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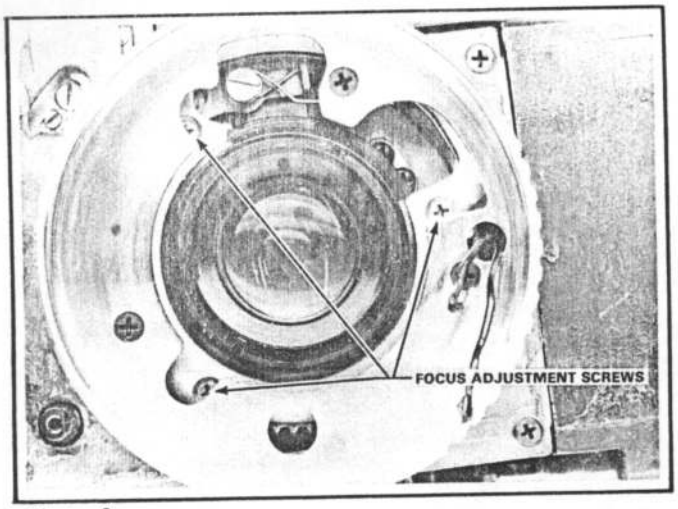

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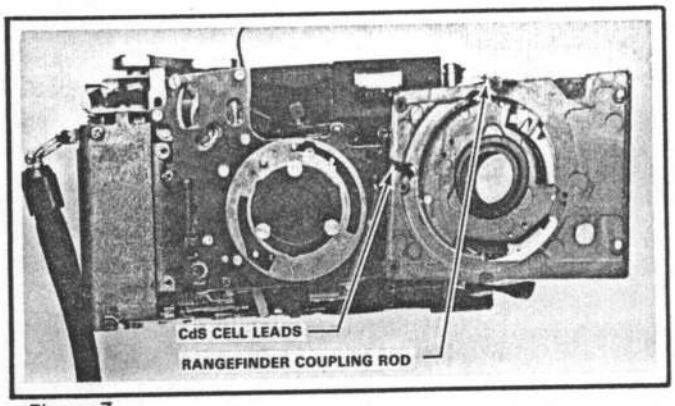

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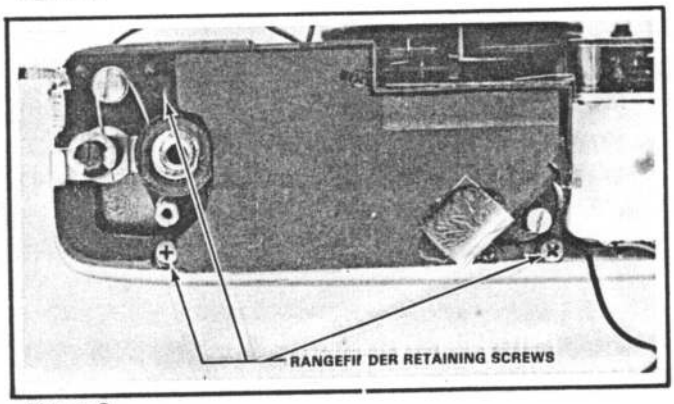

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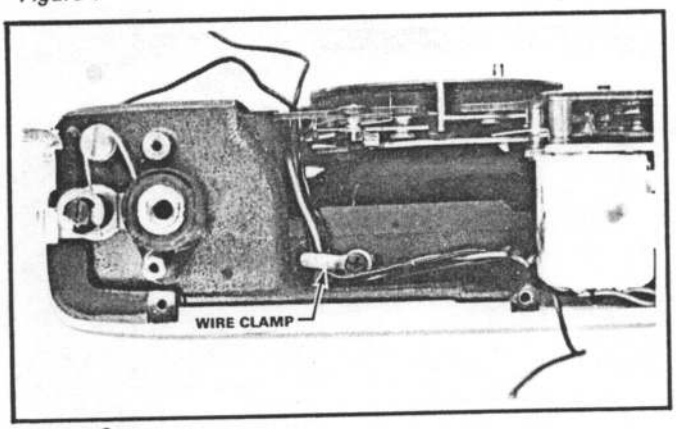

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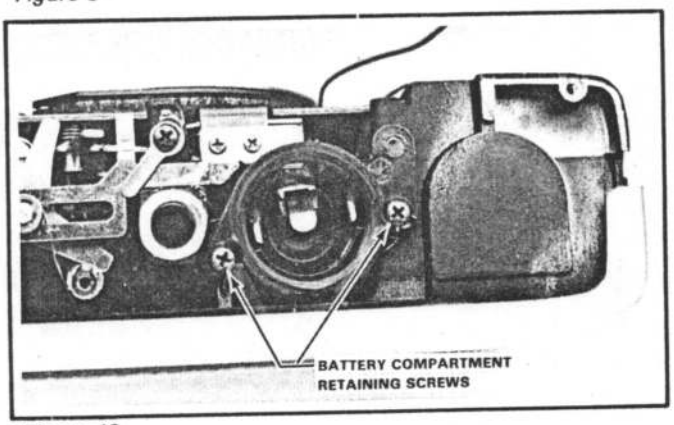

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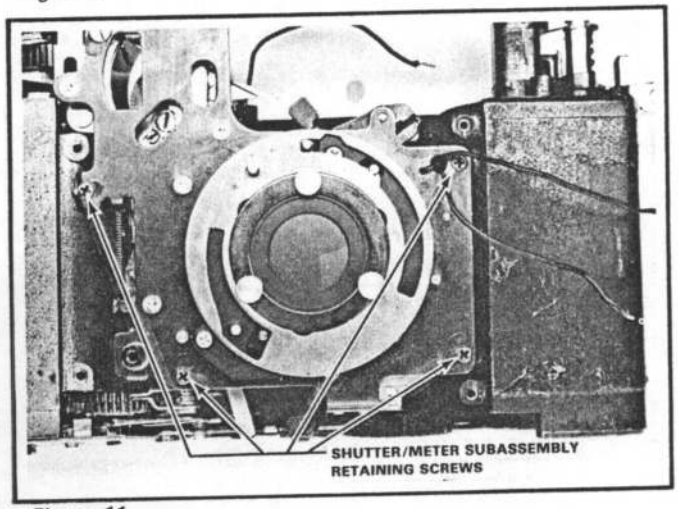

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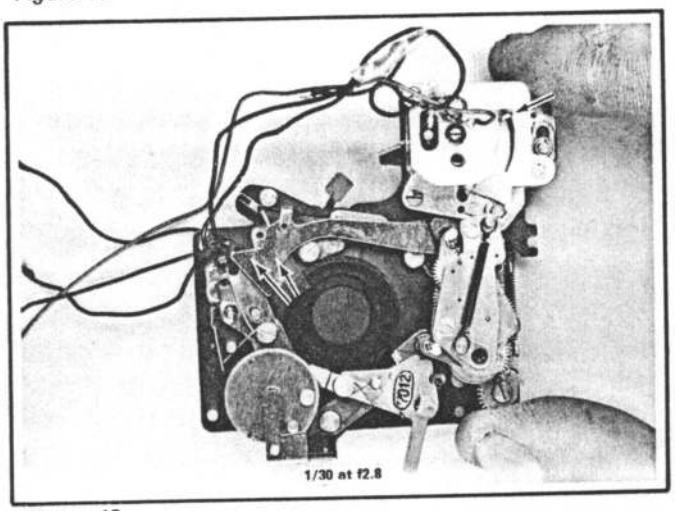

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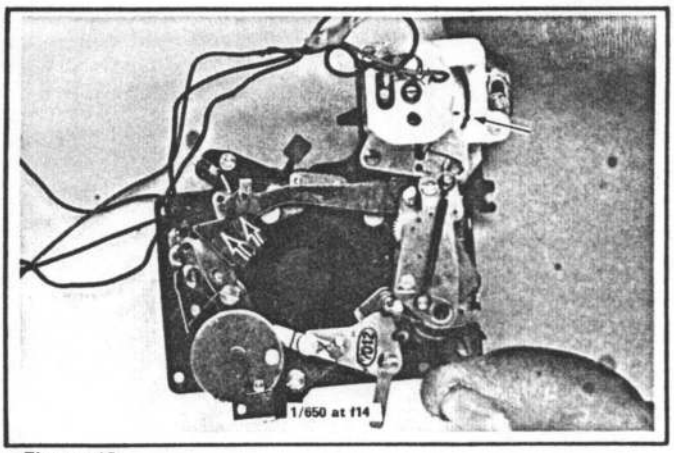

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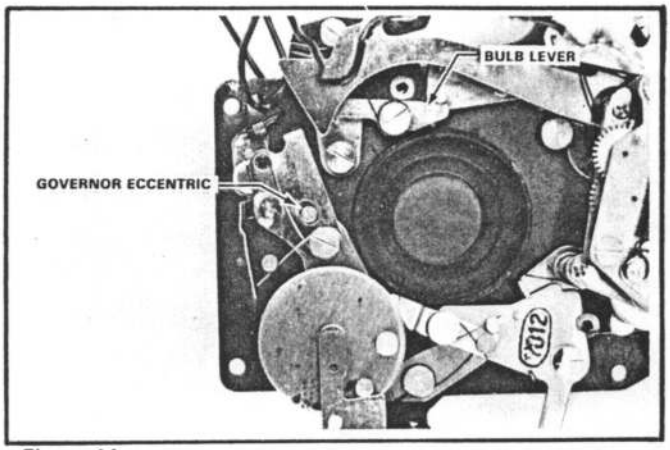

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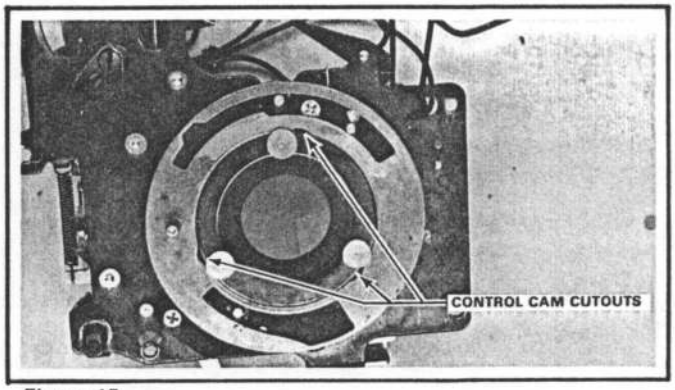

Figure 15

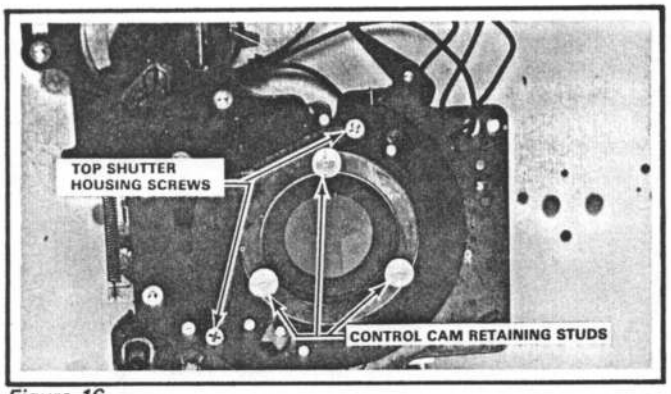

Figure 16

justed. To adjust focus, loosen the three screws which clamp the focus ring to the lens barrel and reposition as necessary, Fig. 6. As the shutter has a bulb setting, this is easily accomplished.

To remove the front-plate assembly, unscrew four screws, Fig. 3, and lift off the assembly while snaking out the CdS cell leads. Watch the rangefinder-coupling rod as it is now loose and easily lost, Fig. 7.

To remove the shutter/meter subassembly for servicing, first remove the rangefinder which is held by three screws, Fig. 8. This is necessary to loosen the meter and sync wires from the clamp which holds them to the body, Fig. 9. Next remove the battery compartment, but do not unsolder the wires, Fig. 10. Now remove the four screws which hold the shutter/meter assembly to the body and then separate the two subassemblies, Fig. 11.

SHUTTER OPERATION

The shutter has three modes of operation; Auto, Bulb and G.N. In the "Auto" mode, the shutter speed/aperture combination is determined by the trap-needle system, which limits the amount the blades open. The higher the light level, the greater the exposure-meter deflection. The amount of deflection determines at what position the E.V. setting lever blocks the blades from opening further, giving the proper exposure for that light level.

The range of the shutter/meter is 1/30 at f/2.8 to 1/650 at f/14. The positions of the E.V. setting lever and the trap-needle can be observed from the rear of the shutter. At 1/30 and f/2.8 the E.V. setting lever moves to its maximum travel, allowing full opening of the blades, Fig. 12. At 1/650 and f/14 the lever moves only far enough to allow the blades to slightly open, Fig. 13. An eccentric cam on the actual movement of the blades.

There is a factory-set eccentric on the governor assembly which changes the amount the blades open. This should be left alone, unless after cleaning and properly adjusting both the trap needle eccentric and the exposure meter, you find exposure is still not correct, Fig. 14.

When switched to "Bulb," the control cam on the front of the shutter allows the bulb lever to move and hold the blades open, Fig. 14.

"G.N." operation uses the control cam to set the amount of blade opening according to the distance of the subject. The farther away the subject, the more fully the blades open.

DISASSEMBLY OF THE SHUTTER

The only disassembly you might want to do is to remove the shutter blades for cleaning. This is accomplished by lining up the three cutouts in the control cam with the studs which position the cam and lifting off the cam, Fig. 15. Remove the two screws now visible and lift off the top housing, Fig. 16. The blades are now loose. Note positions for reassembly.

EXPOSURE METER

The electrical metering system is simple. It consists of the galvanometer, battery compartment and battery, a CdS cell and a single fixed resistor for calibration. Troubleshooting becomes obvious; a bad cell, a bad galvanometer, or a poorly soldered connection. Calibration is done by changing the fixed resistor as needed. Overexposure is caused by not enough meter deflection, so replace the fixed resistor with one of lower value. For underexposure, a higher value is required.

The ASA or film speed, is set through a simple mechanical waterhouse diaphragm in the nameplate ring which varies the amount of light hitting the cell. ASA 25 has the smallest opening, whereas ASA 400 has the full cell uncovered. There is no adjustment for these stops.

The Konica's unique shutter, once understood, is really simple and the camera's modular design and external adjustment systems make it a very profitable camera to service. The Konica manufacturer has developed several variations of this design since the introduction of the original Konica C35.